

REMARKS**Summary of the Office Action**

In the Office Action, claims 16-22 stand rejected under 35 U.S.C. § 103 (a) as being unpatentable over GB 2,313,391 to *Swearingen* in view of U.S. Patent No. 5,595,247 to *Braddick*.

Summary of the Response to the Office Action

Applicant proposes amending claim 16 to further clarify the language thereof. Accordingly, claims 16-22 are pending for further consideration.

All Claims are Allowable

In the Office Action, claims 16-22 stand rejected under 35 U.S.C. § 103 (a) as being unpatentable over GB 2,313,391 to *Swearingen* in view of U.S. Patent No. 5,595,247 to *Braddick*. Applicant traverses this rejection for the following reasons.

With regard to independent claim 16, Applicant respectfully asserts that *Swearingen* and *Braddick*, whether viewed singly or in combination, do not teach or suggest a whipstock casing milling system including at least, “milling blades of the window mill being directly engaged with and deflected by the first ramp surface laterally into the casing as the window mill is rotated and forced along the first ramp surface toward the second ramp or parallel surface; and a protrusion provided on the whipface, the protrusion forming an extension of the first ramp surface of the whipface and being directly engaged by said milling blades as said milling blades travel along said first ramp surface onto said extension so as to reduce damage to the first ramp surface at the juncture of the first ramp surface and the second ramp or parallel surface during use of the system, the first ramp surface and the extension together forming a mill deflecting slope,” as recited in independent claim 16, as amended.

Support for these features recited in independent claim 16 can be found at least on pages 3-6 of the originally filed specification, and in Figs. 5-8 of the originally filed drawings. Specifically, as shown in Figs. 5-8, the present invention provides a whipstock casing milling system including whipstock 44 having a whipface. As shown in Fig. 5, the whipface includes a first ramp surface 45 and a second ramp surface or parallel surface 46 meeting the first ramp

surface at a juncture. A window mill 32 is secured to the whipstock adjacent the first ramp surface and operable in use to form an opening in a wellbore casing. Window mill 32 includes milling blades which directly engage with and are deflected by first ramp surface 45 laterally into the casing as the window mill is rotated and forced along the first ramp surface toward the second ramp. As shown in Figs. 5-8, a protrusion B is provided on the whipface, thus forming an extension of first ramp surface 45 for direct engagement by the milling blades as the milling blades travel along first ramp surface 45 onto the extension so as to reduce damage to the first ramp surface at the juncture of the first ramp surface and the second ramp surface during use of the system. The continuous contact of the milling blades with ramp surface 45 and protrusion B allows for stress at ramp surface 45 to be maintained below a predetermined level so as to avoid damage to the slope until the mill has moved beyond the relatively steep ramp surface and is no longer in engagement therewith.

The Office Action cites *Swearingen* and *Braddick* as teaching or suggesting the whipstock casing milling system recited in independent claim 16.

As correctly acknowledged in the Office Action, *Swearingen* discloses a conventional whipstock accelerator ramp, but fails to disclose a protrusion extending from the first ramp. The Office Action then states that *Braddick* teaches “a protrusion that is an extension of the first ramp thus protecting the first ramp (see column 14, lines 40-58 of *Braddick*),” and furthermore, agrees that “the nose of *Braddick* is the primary wear reducing feature not the protrusion.” The Office Action however concludes that claim 16 would be obvious under the teachings of *Swearingen* and *Braddick* since “*Braddick* has been relied upon merely for the teaching of the protrusion and the advantages of using such a feature.” Applicant respectfully disagrees with the aforementioned conclusion based upon the express teachings of *Braddick* and based upon claim 16 as amended herein.

Specifically, referring to Figs. 9 and 9a and Col. 14:40-58 of *Braddick*, Applicant respectfully asserts that as correctly noted in the Office Action, nose cone 258 for *Braddick* is indeed the primary wear reducing feature of the *Braddick* system, and ramp surface 259 is only protected from mill blade 262 if nose cone 258 is used. For the sake of argument, if nose cone 258 were to be removed from mill blade 262, mill blade 262 would directly impact ramp surface 259 and thus “negate” the teachings of *Braddick*. Moreover, referring to Figs. 9 and 9a of

Braddick, it can be seen that in the absence of nose cone 258, mill blades 262 would not even contact ramp extension 260 until they have moved from ramp surface 259 onto the ramp extension 260. Thus, without nose cone 258, ramp extension 260 provides no protection whatsoever to ramp surface 259 from mill blade 262.

Contrary to the teachings of *Braddick*, the milling blades for window mill 32 of the present invention directly engage first ramp surface 45, and further remain in contact with ramp surface 45 and protrusion B as they travel along first ramp surface 45 onto the extension formed by protrusion B. In other words, *Braddick* clearly does not teach or suggest, “milling blades of the window mill being directly engaged with and deflected by the first ramp surface laterally into the casing as the window mill is rotated and forced along the first ramp surface toward the second ramp or parallel surface; and a protrusion provided on the whipface, the protrusion forming an extension of the first ramp surface of the whipface and being directly engaged by said milling blades as said milling blades travel along said first ramp surface onto said extension so as to reduce damage to the first ramp surface at the juncture of the first ramp surface and the second ramp or parallel surface during use of the system, the first ramp surface and the extension together forming a mill deflecting slope,” as recited in independent claim 16, as amended.

Applicant further respectfully emphasizes that in view of the teachings of *Braddick*, one of ordinary skill in the art would understand the requirement for nose cone 258, and that without nose cone 258, ramp extension 260 is completely ineffective at protecting ramp surface 259. For example, as stated in Col. 14:43-49 of *Braddick*, nose cone 258 and ramp extension 260 “cooperate to position mill blades 262 against casing C ... [o]therwise the mill may have a tendency to mill out the whipstock member 246.” Applicant therefore asserts that as expressly discussed in the disclosure of *Braddick*, nose cone 258 and ramp extension 260 cooperate with one another, and that it would not be apparent to one of ordinary skill in the art that ramp extension 260 can be divorced from nose cone 258 and continue to provide protection for ramp surface 259.

Yet further, Applicant respectfully asserts that in addition to the structural differences in the whipstock casing milling system of the present invention versus the systems of *Swearingen* and *Braddick*, the systems of *Swearingen* and *Braddick* also differ from that of the present invention in the operation thereof. For example, the milling systems of the present invention and

Swearingen do not utilize a nose cone such as cone 258 disclosed by *Braddick*. This difference is significant in that adding a nose cone 258 to the invention of *Swearingen* or the system of the present invention, as would be required if the teachings of *Swearingen* and *Braddick* were combined, would further alter the mode of operation for the system of *Swearingen* and the system of the present invention. In this regard, while the mode of operation for the *Braddick* system requires the ramp extension to cooperate with nose cone 258 to lift mill blade 262 over the ramp to be protected, for the present invention, the ramp extension instead engages the mill blade and controls the area of the mill blade that is supported.

Based at least upon the aforementioned differences in the structure as well as the operation of the whipstock casing milling system of the present invention versus the systems of *Swearingen* and *Braddick*, Applicant respectfully asserts that the milling system of the present invention is clearly patentable over the teachings of *Swearingen* and *Braddick*, as now recited in independent claim 16, as amended.

As pointed out in MPEP § 2131, “[t]o anticipate a claim, the reference must teach every element of the claim.” “A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference.” *Verdegaal Bros. v. Union Oil Co. Of California*, 2 U.S.P.Q.2d 1051, 1053 (Fed. Cir. 1987). Moreover, as pointed out in M.P.E.P. § 2143.03, “[t]o establish prima facie obviousness of a claimed invention, all the claimed limitations must be taught or suggested by the prior art”. *In re Royka*, 409 F.2d 981, 180 USPQ 580 (CCPA 1974). Since the above-identified criteria have not been met, Applicant respectfully asserts that the rejection under 35 U.S.C. § 103 (a) should be withdrawn because *Swearingen* and *Braddick* do not teach or suggest each feature of independent claim 16, as amended.

In view of the above arguments, Applicant respectfully requests the rejection of independent claim 16 under 35 U.S.C. § 103 be withdrawn. Additionally, claims 17-22, which depend from independent claim 16, are allowable at least because their base claim is allowable, as well as for the additional features recited therein.

CONCLUSION

In view of the foregoing, Applicant respectfully requests the entry of this Amendment to place the application in clear condition for allowance or, in the alternative, in better form for appeal. Applicant also requests the Examiner's reconsideration and reexamination of the application and the timely allowance of the pending claims. Should the Examiner feel that there are any issues outstanding after consideration of this response, the Examiner is invited to contact Applicant's undersigned representative to expedite prosecution.

If there are any other fees due in connection with the filing of this response, please charge the fees to our Deposit Account No. 04-2223. If a fee is required for an extension of time under 37 C.F.R. § 1.136 not accounted for above, such an extension is requested and the fee should also be charged to our Deposit Account.

Respectfully submitted,

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